

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-16. (Canceled)

17. (New) A method for identifying a drug response phenotype that varies among cell lines as a consequence of genetic variation in a candidate gene, the method comprising:

a) analyzing a plurality of cell lines derived from unrelated individuals to determine the genotype of the candidate gene in each cell line in the plurality of cell lines;

b) determining the drug response phenotype of each cell line in the plurality of cell lines;
and

c) identifying the drug response phenotype as a drug response phenotype that varies among cell lines as a consequence of genetic variation in the candidate gene if the drug response phenotype correlates with the genotype of the candidate gene.

18. (New) The method of claim 17 wherein the plurality of cell lines comprises at least 20 cell lines.

19. (New) The method of claim 17 wherein the drug response phenotype is measured in the presence of the drug.

20. (New) The method of claim 19 wherein the drug response phenotype is drug uptake.

21. (New) The method of claim 19 wherein the drug response phenotype is drug biotransformation.

22. (New) The method of claim 21 wherein the drug biotransformation is selected from the group consisting of drug hydrolysis, drug oxidation, drug reduction, drug nitration, drug methylation, drug glycosylation, drug glucuronidation, drug sulfation, drug acetylation, drug N-acetylation, and drug conjugation to an amino acid.

23. (New) The method of claim 19 wherein the drug response phenotype is drug sensitivity.